

#### ABSTRACT OF THE DISCLOSURE

Radiopharmaceutical compounds are disclosed. A tropane compound is linked through the N atom at the 8-position to a chelating ligand capable of complexing technetium or rhenium to produce a neutral labeled complex that selectively binds to the dopamine transporter over the serotonin transporter with a ratio of 10 or more. These compounds can be prepared as separate diastereoisomers as well as a mixture of diastereoisomers. Also disclosed are radiopharmaceutical kits for preparing the labeled radiopharmaceutical compounds.

5